

Serial No. 09/844,051

PATENT
Attorney Docket No. 2001B035**REMARKS**

Applicants respectfully request entry of this Amendment and reconsideration of this application, as amended.

Claims 4 through 17 presently stand rejected, although claim 13 has been indicated to be allowable if reworded to overcome the rejection under 35 U.S.C. 112, second paragraph, and to incorporate the limitations of the base claim and any intervening claims. Claims 4 and 17 are herein amended, claims 15 and 16 are cancelled, and a new claim 18 has been added, such that claims 4 through 14, 17, and 18 are now pending.

Rejection Under 35 USC 112, first and second paragraphs

With respect to claim 4, the Examiner indicated that the phrase "essentially free of sulfided hydrogenation metal" was new matter and was indefinite. Applicants have amended Claim 4 to remove the phrase, and therefore respectfully request removal of these rejections. With respect to claim 17, the Examiner indicated that the phrase "substantially free of sulfided hydrogenation metal" was indefinite. Applicants have amended Claim 17 to remove the phrase, and therefore respectfully request removal of this rejection.

Rejection Under 35 USC 103(a)

Claims 4 through 10 and 14 through 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Suggitt et al. (U.S. Patent No. 3,780,123). In particular, the Examiner argues that Suggitt et al. teach a process of disproportionation of cumene in the presence of a mordenite catalyst to produce a product containing benzene and a mixture of diisopropylbenzene isomers.

It is respectfully noted that Suggitt et al. require the presence of a sulfided hydrogenation metal and teach that the catalyst would deactivate rapidly without the metal, thereby teaching away from the present invention. The disclosure of Suggitt et al. also requires a sulfide compound added to the reaction mixture to maintain catalyst activity (column 3, line 73 through column 4, line 16; Example VI; and claim 1). Claims

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4 and 17 have been amended to remove mention of the sulfided hydrogenation metal as discussed above and to specifically exclude the addition of a sulfide as supported by lines 19-21 on page 8 of the specification. It is noted that the present invention requires neither sulfided hydrogenation metal nor a sulfide compound in the feed in order to disproportionate cumene to produce DIPB isomers. Applicants respectfully note that the omission of an element and retention of its function is an indicia of unobviousness. *In re Edge*, 359 F.2d 896, 149 USPQ 556 (CCPA 1966).

Applicants note that the highest ratio of meta to ortho DIPB indicated by Suggit is 85 in Example VI, Run C. The Suggit et al. disclosure does not indicate any impact on the equilibrium ratio of DIPB isomers, stating "The diisopropylbenzenes are formed in a ratio similar to that found with other catalysts." (Column 5, lines 3-5) Applicants, on the other hand, are surprisingly able to achieve ratios of meta- to ortho-diisopropylbenzene of greater than 100, even greater than 500 or 1000. Accordingly Applicants have added the limitation to claims 4 and 17 that the meta- to ortho-DIPB ratio of the effluent be greater than 100. It is respectfully submitted that this is an unexpected result not obvious in light of the Suggit et al. disclosure.

Applicants request consideration of the amended claims and removal of the rejection in light of the present amendments.

The Examiner has rejected claims 11 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Suggitt et al. (U.S. Patent No. 3,780,123) in view of Calabro et al. (U.S. Patent No. 6,049,018). Applicants respectfully apply the same arguments as above with respect to Suggitt et al. and respectfully submit that unobviousness in light of the Suggitt et al. disclosures renders further discussion of Calabro et al. unnecessary.


With the amendments made herein and in light of the clarifications above, it is respectfully submitted that the claims are in condition to be allowed under 35 U.S.C. § 103(a). Accordingly, it is respectfully urged that the Examiner withdraw this rejection.

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In view of the foregoing comments, entry of this Amendment and allowance of this application is earnestly solicited. Should the Examiner have any further comments or questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,

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